REMARKS

This amendment is responsive to the final rejection dated 8/7/03.

The specification was amended at page 3 in order to improve the idiom.

In paragraph 1 of the Office Action, the Patent and Trademark Office objected to the drawings in that the control electronics claimed in claim 12 was not shown in the drawings. Enclosed herewith is a copy of Fig. 1 of the drawing corrected in red to show the control electronics of claim 12 and discussed in the specification. The specification was therefore amended at page 6 to specifically refer to the proposed drawing correction of Fig. 1. The proposed drawing correction should also cover the Patent and Trademark Office drawing objection related to claim 14. Claim 15 was cancelled and so the drawing correction requested by the Patent and Trademark Office as to this claim is now moot.

Claim 1 was amended in order to better define the invention. Claim 5 also was amended in order to better define the invention.

Claims 8-18 were rejected under 35 USC 112, second paragraph, as being indefinite.

Applicants do not agree with the Patent and Trademark Office position that claim 8 is indefinite. However, in order to advance the prosecution of this application, they have amended claim 8 to

delete the material offensive to the Patent and Trademark Office and have substituted therefor subject matter that is without question clear and definite. Support for this amendment can be found, inter alia, at page 2, lines 22-32 of the application. Reconsideration and withdrawal of the "112" rejection of claim 8 is therefore respectfully requested.

Claim 9 was amended so that it avoids the "112" rejection thereof outlined in paragraph 6 of the Office Action. Furthermore, page 3, lines 10-34 and page 4, lines 1-3 of the application, cited by the Patent and Trademark Office in the Office Action, in fact supports the feature that the light emitting diodes set the color temperature of the light emitted by the light source to a level above that of the discharge lamp alone. The cited material states that the discharge lamp has a fixed color temperature of approximately 6500K, and the addition of the LEDs enable the color temperature to be adjusted to a range from, for example, 6,000 to 11,000K. Clearly, the LEDs set the color temperature above the fixed level of the discharge lamp alone. Claim 9 was rewritten into independent form, deleting the objectionable material from parent independent claim 8.

Claim 14 was amended to delete the objectionable "and/or" phrase and so the "112" rejection thereof should now be overcome. Claim 14 was further amended in order better define the invention.

Claims 1, 2, 6, 8, 10 and 12 were rejected under 35 USC 102(e)

as being anticipated by Reithmeier (USP 6,488,385).

The Reithmeier patent does not anticipate the invention as claimed in claims 1 and 8 of this application.

The Reithmeier patent discloses the combination of two or more abutting fluorescent lamps and a plurality of light-emitting diodes. But the purpose of the light-emitting diodes in Reithmeier is to add additional light so as to compensate for dark ridges that occur at the joints of the two or more abutting fluorescent lamps. In contrast, applicants' novel light source includes a discharge lamp which, during normal operation of the illumination system, has a fixed electromagnetic spectrum.

The light-emitting diodes of the present invention (claims 1, 8, etc.) are for the purpose of selectively adjusting or setting the color temperature of the light emitted by the overall light source comprising the discharge lamp and the plurality of light-emitting diodes. This novel concept is not taught by the Reithmeier patent and so it cannot and does not anticipate the invention as claimed in claim 1 of this application, despite some overall similarity to the physical structure set out in claims 1 and 8 of this application. One skilled in the art, faced with the problem of a display device illumination system with a fixed color temperature determined by its electric discharge lamp, would not be taught by Reithmeier that the color temperature of the overall light source could be adjusted by adding a plurality of light-emitting diodes chosen so as to

selectively set (adjust) the color temperature of the light produced by the illumination system to any desired value.

The Patent and Trademark Office further argues, in paragraph 11 of the Office Action, as to certain quoted phrases from claims 1, 2, 8 and 12, that such claimed subject matter is merely a recitation of intended use of the claimed invention and therefore does not patentably distinguish these claims over the applied prior art, citing for legal support the CAFC cases of in re Casey, 152USPQ235 and in re Otto, 136USPQ458. But the examiner has misinterpreted these two cases since they do not represent the fact pattern in this application. In Casey, the elements of the prior art device and the Casey device were the same, but the Casey device was a taping machine, whereas the prior art, Kienzle, was a device for perforating various types of sheet materials. The CAFC found that the Kienzle device was structurally identical to the Casey typing machine and would inherently perform all the functions called for in claim 1 of Casey if it were used with adhesive tape as the workpiece. In the present case, applicants do not argue that their device is an illumination system whereas the Reithmeier patent discloses a device performing some other function or use than an illumination system (both Reihtmeier and applicants devices are illumination devices), but rather that claims 1 and 8 each call for at least one element of the claimed combination that is not present in the Reithmeier apparatus, and therefore there is no structural

identity of the reference device and that claimed in claims 1, 2, 8 and 12 of this application. More particularly, applicants claimed illumination system comprises a plurality of light-emitting diodes for selectively setting, in operation, the color temperature of the light emitted by the light source (see claim 1). The LEDs of Reithmeier are not arranged, nor do they function, to selectively set, in operation, the color temperature of the light emitted by the light source, nor does Reithmeier even suggest the desirability of providing such a function for his LEDs. The functional statement in claim 1, i.e. for "selectively setting" etc. is not the intended use of the claimed illumination system, but is a further definition of the light-emitting diodes. Please note that it is accepted practice to claim a means for performing a certain function. To substitute the term "a plurality of light-emitting diodes" for the word "means" does not vitiate the means plus function rule, but in fact is a more definite way of claiming such a "means" in the context of this application. The holding in the Otto case is similar to that in Casey and is therefore also inapplicable to the facts of this case.

The phrases in issue here are not intended uses of the illumination system, but functional features of a certain element of these claims, i.e. of the light-emitting diodes.

In view of the foregoing remarks, applicants submit that claims 1, 2, 8 and 12 are not anticipated by the Reithmeier device, and are in fact patentable thereover.

Dependent claim 2, recites that the light-emitting diodes produce a light emission wave length for selectively increasing the color temperature of the light emitted by the light source. As discussed above, Reithmeier does not disclose the concept of selectively setting the color temperature of the light emitted by the light source, much less selectively increasing same. The purpose of the Reithmeier light-emitting diodes is not to increase the color temperature of the light from the fluorescent lamps, but only to compensate the aforesaid dark strips between adjacent abutting fluorescent lamps. In fact, column 2, lines 33-37 of Reithmeier, cited by the Patent and Trademark Office, teaches away from the invention in that it suggests that the luminances between the lamp and the LEDs not differ, preferably by a difference less than 10%, in order to provide a homogeneous overall impression. The invention of claim 2 is not taught by the Reihtmeier patent.

Claim 6 is dependent on claim 1 and relates to electronic control of the LEDs in order to control the color temperature of light from a light source, not for control of the intensity of such light, as in Reihtmeier. Claim 6 is not anticipated by Reithmeier.

Amended claim 8 calls for an LED chosen to set the color temperature of the light independently of a display device illuminated by the light source. This is a distinct improvement over the prior art where the color point is controlled by the display device itself, not by the illumination system as disclosed

and claimed herein (see page 2, lines 15-32 of the application).

As to claim 12, the Patent and Trademark Office relies on column 3, lines 12-15 and column 2, lines 33-37 of the reference. However, neither of these passages teach a control electronics for selectively setting the luminous flux of at least one light-emitting diode dependent upon the color temperature of the ambient light, or under control by a user of the illumination system.

Claims 1, 2, 6, 8, 10 and 12 are not anticipated by Reithmeier because the Office Action does not provide sufficient factual support to make out a prima facie case of anticipation under 35 USC 102.

Claims 1, 2, 6-8, 10, 12 and 14 were rejected under 35 USC 102(e) as being anticipated by Harter, Jr. (USP 6,447,132), a new ground of rejection.

In Harter, the high brightness source (e.g. fluorescent lamp) is dimmed to cope with the illumination requirements, i.e. day and night conditions (see Harter, column 1, lines 29-35). Problems occur when the high brightness source is dimmed to a low illumination resulting, in particular, in unwanted color shifts (see Harter, column 1, lines 35-39). To avoid these problems, the low brightness light source (e.g. LEDs) is introduced in Harter to compensate for this drawback. This is explained in Harter at column 2, lines 57-59, "Light from the low brightness light source mixes with light from the high brightness light source to reduce color

shift (e.g. color temperature light) problems".

In the present application, there is a fixed "high brightness light source", i.e. a low pressure mercury vapor discharge lamp. "Fixed" in this respect means that the electromagnetic spectrum of the low pressure mercury vapor discharge lamp is substantially invariant during operation (see the application, page 2, lines 8-9).

The low-pressure mercury vapor discharge lamp in the present invention is not dimmed since that would cause a change in the electromagnetic spectrum (e.g. the color point) of the low-pressure mercury vapor discharge lamp. The incorporation of the "low brightness light source", i.e. the LEDs, in the present application allows one to adjust the color temperature of the overall light source without changing the intensity of the discharge lamp, thereby avoiding the problems present when a discharge lamp is dimmed.

Claim 1 was amended so as to better reflect this distinction (see page 2, line 8 of the application). Amended claim 1 is novel over Harter because the electromagnetic spectrum of the high brightness light source is not fixed in Harter. As a result of the dimming of the high brightness light source in Harter, the electromagnetic spectrum shifts, causing a change in the color temperature of the lamp. In Harter, the low brightness light source is employed, in part, to provide compensation so as to reduce such color shift.

In addition, Harter teaches away from the present invention.

In Harter, the invention focuses on compensating (reducing) any color shift due to the dimming of the high brightness light source if low light levels are desired, whereas in the present invention color shifts are introduced to add to the image displayed by the display device (see page 2, lines 15-32). Employing the LEDs allows the color point of a displayed image to be adjusted without regulating the transmission factors of the pixels of the display device. Claim 1 is novel over the Harter apparatus and provides significant advantages thereover and so is worthy of receiving patent protection.

Amended claim 8 also recites a discharge lamp with a fixed electromagnetic spectrum, in contrast to the Harter device, as discussed above in connection with claim 1. Claim 8 too is not anticipated by the Harter apparatus.

As for claim 12, the precise feature claimed is control electronics selectively setting the LED luminous flux dependent upon the color temperature of the ambient light. The cited factual support material in Harter, column 2, lines 43-48 and column 3, lines 58-66, is at least inconclusive. Column 2, lines 43-48 calls for control of the intensity of the light sources responsive to ambient light conditions, but is silent as to control based upon the color temperature of the ambient light. Column 3, lines 58-66 describes details of the control of the brightness of the light sources, but again is silent as to color temperature being the

criterion factor. Claim 12 is patentable.

The Patent and Trademark Office argument in paragraph 14 as to the intended use doctrine, as related to claim 14, has been answered above in connection with the similar argument by the Patent and Trademark Office in paragraph 11 of the Office Action in connection with claims 1, 2, 8 and 12, as rejected on Reithmeier. Claim 14 is therefore also not anticipated by Harter as the legal basis for it is invalid.

Claims 1, 2, 6-8, 10, 12 and 14 are all patentable over Harter, Jr. It is further noted that applicants priority date under 35 USC 119, 2/19/01, antedates the Harter, Jr. filing date, of 2/20/01.

Claims 1, 8 and 18 were rejected under 35 USC 102(a) as being anticipated by German patent (DC20007134).

The "102" rejection of these claims is invalid because the reference is in German and the Patent and Trademark Office has not presented an English language translation of the pertinent portions of this reference so as to provide factual support for the examiner's opinion as to what is disclosed in Fig. 1 of this patent. For example, the examiner alleges that the element 8 in the German patent is a light-emitting panel, but cites no factual evidence to support this statement. Furthermore, from the drawing, if the element 6 in the German patent is a light source, as alleged by the Patent and Trademark Office, then it would appear that element 9, whatever that is supposed to be, would block light from the alleged

light source 6 from reaching the alleged light-emitting panel 8. The Patent and Trademark Office argument further states that the alleged light-emitting diodes (10) in the German patent selectively set the color temperature of the light, citing the abstract, which is in German, and without providing an English translation thereof.

Please take note of 35 USC 132, which requires an examiner to state the reasons for any claim rejected, "together with such information and references as may be useful in judging of the propriety of continuing the prosecution of his application". Surely, the very least the Patent and Trademark Office should do is provide an English translation, at least of the pertinent parts, of any foreign language reference used to reject a claim.

The "102" rejection of claims 1, 8 and 18 as anticipated by the German patent is without any valid factual support on the present state of the record and therefore does not present a prima facie case of anticipation.

If the Patent and Trademark Office persists in this ground of rejection, then the next Office Action should provide an English translation of the pertinent parts of the German reference which will provide factual support for the "102" rejection of the aforesaid claims.

Claims 3, 4 and 11 were rejected under 35 USC 103(a) as being unpatentable over Reithmeier (USP 6,488,385) in view of Turnbull et al (USP 5,803,579).

The material in the Turnbull patent cited by the Patent and Trademark Office in support of its "103" rejection of claims 3, 4 and 11 has nothing at all to do with the problem solved by the present invention. Furthermore, since there is no indication or suggestion in the Reithmeier patent that any problem exists therein related to the color temperature of the fluorescent lamps, there is no reason or motivation to employ any blue LEDs of Turnbull in the device of Reithmeier. The Patent and Trademark Office attempt to combine the teachings of Turnbull et al with that of Reithmeier is based upon an impermissible hindsight reconstruction of such prior art (and based upon the present disclosure herein).

In addition, the Turnbull et al patent does not cure the aforesaid deficiencies in the Reithmeier patent discussed above in relation to the "102" rejection of claims 1 and 8, and so any combination of these two references, even if obvious, which it is not, still will not produce the device as claimed in claims 3, 4 and 11 of this application.

Claims 3, 4 and 11 are unobvious over the applied prior art and are therefore patentable thereover.

Claims 5 and 15 were rejected under 35 USC 103(a) as being unpatentable over Reithmeier (USP 6,488,385) in view of Maas et al (USP 6,539,656).

Claim 15 was cancelled and so the 102 rejection thereof is now moot.

As the Maas el al patent does not cure the above described deficiencies in the Reithmeier patent, any combination of these two references, even if obvious (not yet proven), would still not result in the illumination system claimed in claim 5.

Claim 5 is unobvious and therefore is patentable over the applied prior art in the Office Action.

In view of the incomplete nature of the first Office Action, and the above discussed defects in the present Office Action, at least as to the "102" rejection based upon the German patent, and the presentation of new art and new grounds of rejection in the Office Action of 8/7/03 (also see the Petition filed 9/24/03), the above amendments to the claims should now be considered on their merits and a new, non-final Office Action should be forwarded to applicants.

Please charge the cost of any additional fees in connection with the above amendment to Deposit Account No. 14-1270.

Reexamination and allowance of the application are respectfully requested.

Respectfully submitted,

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